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(71) Applicant
Robert John Henry Fisher
3 Nash Close, Elstree, Herts, WD6 3LE

(72) Inventor
Robert John Henry Fisher

(74) Agent and/or Address for Service
R J H Fisher
3 Nash Close, Elstree, Herts

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(58) Field of search
A4F
Selected US specifications from IPC sub-class
A47L

(54) Brush roller arrangement

(57) An upright vacuum cleaner is provided with a brush roller which, in use is capable of brushing both forwardly and sideways simultaneously.

The Dual Sweep Brush Roller

This invention relates to a forward and sideways propelled brush roller for use within upright vacuum cleaners.

It is put into use by a steel band that circles the brush roller and on which the drive belt will run. Just inside the circular steel band steel balls will be mounted on pivots, one ball to each pivot allowing each ball to rotate freely to the left or to the right the pivots will be wider above the ball with a ring, washer or any other means to prevent the steel ball moving up the pivot. Three pivots each with one ball will be needed for the dual sweep brush roller to function correctly. It is understood that this number can be increased or decreased to suit the best requirements of the dual sweep brush roller.

In the appropriate position within the brush roller oblong slots will be cut, one slot for each ball. Each slot will be shaped to fit the contour of the ball and may include two or more small rods or rails for the ball to ride or rotate against. This will ease the sideways movements of the brush roller. Each slot will be wide enough to allow the ball to rotate and long enough to allow the brush roller to move the required distance within the circular steel band. When the balls are accommodated within the slots a narrow circular gap will separate the brush roller from the steel band. The steel band may be manufactured in sections that will clip together. This will allow easy removal to clean out any dust that may enter the slots.

The steel band can be of any workable width, can be rimmed ribbed or bevelled to hold the drive belt in the correct centre position. It is understood that any suitable means can be employed to prevent dust from entering the slots. One or more cams of any suitable form may be fitted to the brush roller. To propel the revolving brush roller sideways within the steel band.

It is understood that any suitable means may be employed for interposing the sideways movement of the brush roller. The brushes of the dual sweep brush roller will be positioned to give maximum efficiency. It is understood that the steel balls can be modified to a spherical or other suitable shape, the slots shaped accordingly to suit the best requirement of the dual sweep brush roller.

It is understood that any materials or metals can be interchanged to suit the best requirement of the dual sweep brush roller. It is understood that any fittings or means may be employed for interposing the dual sweep brush roller within upright vacuum cleaners. It is understood that some modifications may need to be made to upright vacuum cleaners to incorporate the dual sweep brush roller. It is understood that this type of dual propulsion may be applicable to other types of machinery.

The dual sweep brush roller will brush forward and sideways simultaneously and will vastly improve the efficiency of upright vacuum cleaners. Especially suitable for the removal from carpets of animal hairs.

Claims

The dual sweep brush roller when fitted to upright vacuum cleaners will brush forward and sideways simultaneously, and will vastly increase the brushing and cleaning power of upright vacuum cleaners especially suitable for the removal from carpets of animal hairs.